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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/371,760	08/10/1999	TOMOYUKI FUNAKI	25484.00750	9629

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EXAMINER
NOLAN, DANIEL A

ART UNIT	PAPER NUMBER
2655	

DATE MAILED: 01/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No.	Applicant(s)	
	09/371,760	FUNAKI, TOMOYUKI	
	Examiner	Art Unit	
	Daniel A. Nolan	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 August 2002 & 12 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *4-10,12,13 and 15-28* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *12,13 and 15-21* is/are allowed.

6)☒ Claim(s) *4-10 and 22-28* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10 August 1999* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *23* .
4) ☐ Interview Summary (PTO-413) Paper No(s). *18* .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

(Note that as of October 1, 2002 a new **Art Unit 2655** was established that includes this application, and that this new AU number should be used in all future correspondence.)

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Information Disclosure Statement

2. The information disclosure statement filed 12 December 2002 fails to comply with 37 CFR 1.98(a)(1), which requires a list of all patents, publications, or other information submitted for consideration by the Office.

The document titled "Notice of Grounds for Rejection" for Japan Patent Application Nr. 11-248087 was not included with the other reference materials provided on the PTO Form 1449. It has been placed in the application file, but the information referred to therein has not been considered.

Continued Examination Under 37 CFR 1.114

3. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set

forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12 December 2002 has been entered.

Response to Argument

4. Applicant's arguments filed 12 December 2002 have been fully considered but they are not persuasive.

- In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *volume*) are recited in the alternative in the rejected claim(s).

  Consequently, the prior action did not cite a reference for *volume* as the pitch/frequency determining characteristics sufficed. However, that particular art also mentions including volume as Kohler does (*amplitude* in column 8 lines 60-61).

- In response to applicant's argument that the EGG device of Teaney is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the EGG has found practical application as substitute for microphone under adverse conditions, as in

military armored vehicles, and consequently its output merits the same consideration with respect to providing audio signals as afforded a microphone or any other conventional transducer.

- In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., *the manner in which limits are established*) are not recited in the rejected claims. Further, that the prior art does not consider *thresholds* happens not to be the case, even with Kohler (column 17 line 66 – column 18 line 10).
- Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

Teaney

5. Claims 22-27 are rejected under 35 U.S.C. 102(b) as being directly anticipated by Teaney (U.S. Patent 5,171,930).

6. Regarding claims 22, 24 & 26 and 23, 25 & 27, Teaney (column 2 lines 19-21) reads on the features of *extracting volume* and *extracting pitch.* Both features of *volume* and *pitch* are combined to read on the feature of *threshold* values (as in column 5 line 11).

Claim Rejections - 35 USC § 103

Kohler

7. Claims 22-28 and 4-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler (U.S. Patent 6,140,568).

8. Regarding claims 22-27, Kohler claims in his claim 1 the specific features of *receiving signals, extracting characteristics* (decomposing) *and setting parameters.*

9. Regarding claims 22, 24 and 26, Kohler employs a MIDI converter to process *volume* (column 3 line 62) and further uses that MIDI to set *thresholds* (column 5 lines 10-12).

While Kohler does not specifically mention setting a *volume threshold* because he qualifies the above referenced disclosure as examples (bottom of column 4), Kohler does indicate establishing parameters on the basis of *amplitude* (column 8 lines 60-61).

Consequently, it would have been obvious to a person of ordinary skill in the art of signal processing at the time of the invention to put the volume threshold detection mechanism at that point to start, continue and stop processing as shown by Kohler in figures 9 & 10.

10. Regarding claims 23, 25 and 27, Kohler describes filtering out non-pitched content (column 3 lines 52-55). While not specifying upper and lower pitch limits, it would have been obvious to a person of ordinary skill in the art of signal processing at the time of the invention to establish limits beyond which and less than which a signal would be considered.

11. Regarding claims 4 and 28, the claims are set forth with the same limitations as claims 22 and 23, respectively. Kohler represents a *display* in figure 2 for presenting information to the user/operator (column 10 line 41).

12. Regarding claim 5, the claim is set forth with the same limitations as claim 4. Kohler claims direct control of the parameters (3rd feature of claim 30) enabled by the keyboard (column 10 line 26).

Kohler & Humphrey'75 *et al*

13. Claims 6-10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kohler in view of Humphrey'75 *et al* (U.S. Patent 3,894,186).

14. Regarding claim 6, Kohler discloses the features of *Input* (addressed in response to claim 1) and *pitch extracting* (*ibid.* responding to claim 3).

Kohler further discloses the means to *determine notes* (column 3 line 47) using *pitch* with the recognizer (item 400, figure 1) in response to prior attempts (last

paragraph of column 1 through column 2 line 35) more successfully (in figure 16 items 421284-421286).

Kohler does not disclose a *scale designation section* to correlate the above note determination with the values of a scale. Humphrey'75 *et al* explicitly assigns notes by activation of a visual device in reaction to pitch values (last paragraph of column 9). Because Kohler, Humphrey'75 *et al* and the immediate invention strive to present audio signals in visual form, it would have been obvious to a person of ordinary skill in the art of signal processing at the time of the invention to employ a well known coding scheme such as musical notation and its attendant scale rather than to attempt to train operators in technical representation.

15. Regarding claim 7, the claim is set forth with the same features as claim 6. While Kohler does not deal with presentation using a scale and so would not be expected to address the use of different scales, Humphrey'75 *et al* teaches the characteristics of the scales (in column 4 lines 42-45) as being either *diatonic* or *chromatic* of 7- or 12-tones, respectively.

16. Regarding claim 8, the claim is set forth with the same features as claim 7. While Kohler does not deal with presentation using a chromatic scale and so would not address the matter of assigning *diatonic* or *intermediate* notes. Humphrey'75 *et al* recognizes the possibility of implementing either scale (starting at the 6th line from the

end of column 20 and in the 1st paragraph of column 24).

17. Regarding claim 9, the claim is set forth with the same features as claim 8. While Kohler does not deal with presentation on a musical scale and so would not address the matter of assigning *diatonic* or *intermediate* notes. Humphrey'75 *et al* recognizes that different representations could be used, changing the number of output or display elements (column 24 2nd paragraph). Further, it would have been obvious to a person of ordinary skill in signal processing at the time of the invention that dealing with a signal with finite limits increasing the number of elements will the narrow the intervals between them, or pitch extremes, and reducing the number of division will broaden the pitch limits.

18. Regarding claim 10, the claim is set forth with the same features as claim 6. Kohler teaches that *note length* and specific *minimums* (column 21 lines 29-32) validate a note. This *minimum note length* corresponds to the *unit* of the claim as being the lowest amount that is considered. It would have been obvious to a person of ordinary skill in signal processing at the time of the invention that the predominant basis for established equivalence scales and measures is the smallest recognizable part.

Allowable Subject Matter

19. Claims 12, 13, and 15-21 are allowed.

20. The following is a statement of reasons for the indication of allowable subject matter:

- Regarding claims 12, 15, 17, 19 and 20; the features of *input*, *pitch extracting* and the means to *determine notes* using *pitch* are the same as those for claim 6 and 3, the ability to use different scales to represent processing is neither anticipated nor has it been found in an obvious combination in the prior art of record.
- Claims 13, 16, 18 and 21 depend on claims which have been found to be allowable and so do they become allowable as a result.

Conclusion

21. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

22. Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Daniel A. Nolan at telephone (703) 305-1368 whose normal business hours are Mon, Tue, Thu & Fri, from 7 AM to 5 PM.

If attempts to contact the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To, can be reached at (703) 305-4827.

The fax phone number for Technology Center 2600 is (703) 872-9314. Label informal and draft communications as "DRAFT" or "PROPOSED", & designate formal communications as "EXPEDITED PROCEDURE".

Formal response to this action may be faxed according to the above instructions,

or mailed to: Box AF
Commissioner of Patents and Trademarks
Washington, D.C. 20231

or hand-delivered to: Crystal Park 2,
2121 Crystal Drive, Arlington, VA,
Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Technology Center 2600 Customer Service Office at telephone number (703) 306-0377.

Daniel A. Nolan
Examiner
Art Unit 2655

DAN/d
January 24, 2003

1/24/03

DORIS H. TO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600